RESEARCH HIGHLIGHT

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Adapting Homes to Extend Independence

Case Study of 13 Frail Seniors in Québec City Suburbs

INTRODUCTION

The results of past research have confirmed the overwhelming wish of seniors to "age in place" (that is, to continue to live in their current home and familiar community for as long as possible, even if their health changes). This wish to age in place is particularly strong among owners of single-family houses. Large areas of Quebec's urban agglomerations are suburbs, most of which were built between 1950 and 1970. Enabling frail seniors living in old suburbs to stay in their homes by providing them with home care services in an environment that is adapted to their changing needs is an alternative to institutionalization that is financially viable and an ethical response to their wish to remain in their familiar environment.

There are two main strategies to adapt seniors' homes: first, adding assistive devices and other technical equipment and second, modifying rooms and areas such as hallways and entrances. While there are technical guides on adapting a home, there are no guides that deal with the adaptation process from the viewpoint of the occupants of the home.

This qualitative research examined the process and experience of adapting the homes of frail seniors living in suburban houses. The research was conducted by Geneviève Vachon and Carole Després, professors at the École d'architecture of the Université Laval, with financial assistance under the External Research Program of Canada Mortgage and Housing Corporation (CMHC).

The researchers looked at the technical and financial assistance received by the senior residents and their perception of the adaptation experience. They also sought the viewpoints of the professionals, such as occupational therapists, architects, architectural technicians and builders, involved in the home adaptation process.

OBJECTIVES

This research project attempted to answer the following questions:

1. What are the factors that trigger home adaptations?
2. What financial and technical assistance is available for home adaptations?
3. What are the steps involved in a typical adaptation project under the province of Quebec universal assistance program?
4. What are the most common adaptations for single-family houses?
5. What is the perception of frail seniors and their relatives of the home adaptation process?
6. How satisfied are the individuals with the adaptations?

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METHODOLOGY

This research resulted from a collaborative effort between the École d'architecture of the Université Laval; the home care services program of the CLSC (local community service centre) in Orléans, which covers large suburban sectors of Québec City; and the Division de la recherche of the Société d'habitation du Québec (SHQ —the province of Quebec housing agency), which authorized access to the financial and technical assistance files of the Residential Adaptation Assistance Program (RAAP) dated between 2001 and 2003 for the Quebec Region. The information was non-nominative—that is, it did not identify recipients.

There were four components to the methodology

1. A review of literature on home adaptations with an emphasis on home care and population aging.
2. A quantitative analyses of non-nominative data from 121 files, including 34 in-depth, from the SHQ RAAP, of adaptations funded between 2001 and 2003 for owners of suburban houses aged 50 years or older.
3. A qualitative survey of 13 frail seniors who had adapted their homes. The objective was to gain a good understanding of the seniors' adaptation experience and appreciation of the outcome. Most of these seniors lived in the suburban boroughs of Beauport and Charlesbourg of Québec City.
4. Meetings with the occupational therapist and the architect of the SHQ involved in the administration of the RAAP; two consulting architects specializing in home adaptations; and a building contractor. The researchers also facilitated a focus group with occupational therapists from the home care services program of the CLSC in Orléans.

RESULTS

Financial assistance for home adaptations in Quebec

It is always possible for individuals to have their homes adapted without receiving any financial assistance; a few private architectural firms offer this specialized service. For cases other than those involving victims of road or work accidents, which were not covered by this study, there are two government residential adaptation assistance programs. These programs are administered by the Société d'habitation du Québec (SHQ) and funded by the SHQ and Canada Mortgage and Housing Corporation (CMHC).

The Home Adaptations for Seniors' Independence (HASI) program provides up to $3,500 in assistance for minor adaptations to a home occupied by a low-income senior 65 years old or older. This program generally covers small adaptations to help seniors who find it difficult to perform certain everyday activities.

The Residential Adaptation Assistance Program (RAAP) is a universal access program, which provides funding regardless of the income of applicants who want to adapt their homes to overcome severe and persistent functional limitations that affect their activities of daily living. Eligible adaptations must reduce or eliminate the architectural barriers in the dwellings of persons with disabilities so that they are able to enter, leave and have independent access to the rooms and facilities required for everyday living (SHQ, 2005). Assistance of up to $16,000 is available to homeowner households, unless additional assistance deemed exceptional is obtained. Between 2001 and 2003, 34 adaptations were funded in the Québec City area under the RAAP, for single-family houses whose owners were 50 years old or more. What does the review of these cases reveal?

Most common adaptations

The most common adaptations were improving exterior accesses and interior circulation and redesigning bathrooms, kitchens, other rooms and storage spaces.

Steps in the RAAP application process

Occupational therapists from CLSC home care services most often initiate home adaptations, by suggesting to their clients that they submit an application for RAAP financial assistance.

The main steps are:

1. The consent of the owner of the building where the work will be performed is obtained.
2. The applicant's eligibility is assessed by an occupational therapist from the CLSC.
3. A provisional assistance application form is submitted to the SHQ, which automatically enters the beneficiary on the waiting list until the funds are released.
4. After getting the green light and with the collaboration of the SHQ, the occupational therapist determines the needs.
5. Adaptation drawings and specifications are prepared by an authorized SHQ representative (generally a Technical Resource Group (TRG) or municipal staff member) to establish the amount of assistance.
6. The applicant requests a renovation cost estimate from at least one building contractor.
7. The SHQ approves the complete file and determines the amount of the grant based on the estimate of the authorized representative and the lowest bid among the contractors.
8. The work is performed by a bidding general contractor that meets with the approval of the SHQ, and the applicant pays the contractor.
9. The assistance is paid to the owner after a compliance check by the authorized representative.

Length of the home adaptation process

An analysis of the 34 assistance cases studied showed significant periods between the date when the application form was received and the date when the case studies were put on the waiting list. It took an average of 16 months before the SHQ had the budget to process the application. The authorized representative handling the file took, on average, just over 13 months to produce the drawings and specifications. It then took another two months or so to get the approval of SHQ professionals. The amount of time before bids could be sought from building contractors was therefore considerable. The bidding and work performance stage lasted about six months. Compliance of the work was then assessed by the authorized representative. SHQ provided financial assistance to the applicant within one week. The time elapsed from the beginning to the end of the process ranged from one to five years for the 34 cases, with the average being three years and two months.

The adaptation experience of 13 suburban frail seniors

Profile of respondents

Respondents use a prosthesis, cane, walker or wheelchair every day. Some are hemiplegic (paralysis of one side) or quadriplegic (paralysis of all four limbs), while others have limited mobility because of chronic inflammatory diseases. Several have reduced mobility as a result of multiple sclerosis, Parkinson's disease or muscular dystrophy. All can count on the assistance of family members and receive medical care from CLSC home care services. Some receive visits from an attendant for washing and dressing almost every day. For most, caregivers who are often from private services (which may or may not be paid under a CLSC program) come regularly to prepare meals and clean the house.

Triggering factors for home adaptations

There are three triggering factors:

1. *Aging with a pre-existing disability*
People for whom aging heightens certain limitations use a conventional wheelchair or four-wheel scooter to get around both indoors and outdoors. Adapting the house to make it easier for these people to get around in a wheelchair is therefore of utmost importance.

2. *Degenerative disease*
With a degenerative disease, adaptations must be planned that account for a growing loss of mobility and independence and the need for increased support from workers and caregivers. In the early stages, loss of balance is dangerous, and all obstacles that could cause falls must be removed. Eventual confinement to a wheelchair is practically inevitable.

3. *Severe inflammatory disease*
This type of disease attacks joints or the nervous system, or both, and is accompanied by pain, swelling and deformities. Joints in the hands and feet are most often affected, and the pain can be severe enough to make walking and daily activities difficult.

Types of adaptations

The adaptations mainly involved redesigning bathrooms and kitchens and improving room and exterior accesses. Bathroom adaptations consisted of widening the door and making the bathroom larger for easier wheelchair movement, adding a walk-in shower, installing grab bars, modifying the vanity for wheelchair access and adding safer plumbing fittings.

Kitchen adaptations included lowering counters and cabinets, modifying the toe-kick for wheelchair access and adding sliding drawers and shelves with easy-to-grasp handles.

Adaptations were also made in other rooms. Adaptations in the master bedroom included putting in rails for a lift, installing grab bars and widening doors. To eliminate barriers to accessibility, doorsills were lowered or bevelled and remote-controlled automatic door openers were added. In several cases, carpets were replaced by hard floor coverings.

An outside platform lift improved access to the yard. The addition of an inside platform lift or elevator to facilitate access to the upper floor or basement remained marginal.

Funding, turnaround time and process for the adaptations

Given the limited funding, which was far from covering all the needed adaptations, several people had to spend significant amounts to complete the necessary modifications or forgo the platform lift or adaptations to a room — usually the kitchen. The general perception was that there were numerous steps to follow and many people involved in the adaptation process.

Step 1 — the preparation of the construction drawings and specifications — was well facilitated by the technical expertise of the occupational therapists and architectural professionals; step 2 — the bidding process with contractors — was more difficult; step 3 — the approval of the drawings and specifications by the SHQ — added to the length of the process; on the other hand, starting the work without SHQ approval would automatically result in not getting reimbursed; and step 4 — the actual renovations — was the most stressful, with dust, noise and odours that could be harmful for a person in poor health.

Satisfaction with the adaptations

The people surveyed were unanimous in saying that the adaptations improved the comfort and quality of life for themselves and their family members. They felt safer, with the risks of falls and injuries considerably reduced. They felt less confined indoors, as they were able to access more rooms. The bathroom modifications were particularly appreciated, as they allowed persons with limitations to maintain their dignity and privacy.

Not being able to access the basement to do odd jobs made some men dream of an elevator, and not being able to adapt the kitchen meant less participation for a few women in an important aspect of family life. Work on exterior accesses was more or less appreciated, even among those who had a platform lift. Quebec winters are the cause of many difficulties that should be taken into account. Adaptations should also include safe and easy access to the car, garden and street. Finally, adaptations that improve the appearance of the house by avoiding an institutional look helped make the transformation process easier to accept for the respondents and their families.

PROFESSIONALS' VIEWPOINT OF HOME ADAPTATIONS

Technical resource group (TRG), main authorized representative in Québec City

Around one-third of the files were closed during the waiting and processing period, because applicants died; gave up on account of the time or complexity of the process; moved; or because the estimated costs were too high. The applicant's responsibility for contacting and hiring a contractor and welcoming the many people involved in the adaptations to their homes was a heavy one. Making available a list of qualified contractors who are familiar with home adaptations would make it easy for applicants to choose one.

Building contractor

Building contractors' clients found a contractor from advertisements in the telephone directory showing the disability symbol but mostly through word of mouth. Clients were often overwhelmed by the scope of the work and the number of people involved. Their goal was to shorten the duration of the work as much as possible.

The TRG professionals and contractors agreed on the need to increase the assistance ceilings, which have apparently not been raised since 1991, as construction costs continue to increase. The contractors suggested ending the universality of the program so there could be more generous assistance for lower-income households. They also agreed that there is a growing disparity between TRG and contractor cost estimates and the SHQ price list, which is indexed every year by type of work. The actual cost of the equipment is recognized based on two bids from qualified contractors. Lastly, the experience of these professionals suggests that eligible adaptations should include "enclosed" exterior platform lifts for use in all seasons; temporary shelters or transition areas at the entrance to facilitate wheelchair access; a room for leisure activities; and "landscaped" exterior access ramps that blend in with the house.

CONCLUSIONS AND RECOMMENDATIONS

This research shows the importance for the provincial ministère des Affaires municipales et des Régions, ministère de la Famille et des Aînés and ministère de la Santé et des Services sociaux to work more closely together in establishing directions related to home adaptations within their policies and programs on housing, family and senior support, and home care.

The expertise of professionals at the SHQ, the home care program of a CLSC, a TRG and a building contractor should be combined with that of frail persons — the "experts" in daily living—and that of other researchers and consultants to develop best practices in home renovation.

The issue of training needs of home adaptation professionals remains unresolved. University programs in architecture, environmental design and interior design should offer, among other things, joint options with occupational therapy, in particular. Information should be systematically made more widely available to individuals wishing to adapt their homes and these people should be offered increased professional expertise and technical support. Those who can afford to pay for the adaptations should be redirected to private, qualified professional resources. For clients with more modest means, the problems of waiting lists, processing times and limited assistance under the RAAP suggest greater need for human and financial resources.

The number of home adaptation projects funded remains negligible compared to the significant needs that health and housing services will face in the medium term. The researchers produced a compendium of home adaptation experiences that describes the steps and the technical and financial aspects of home adaptations, while revealing the human aspects. It is int. ded for people with severe health problems who are thinking of adapting their homes; their family members; and health care workers and building professionals interested in home adaptation issues. This forthcoming compendium will be available for download from CMHC's website at http://www.cmhc-schl.gc.ca/en/.

Despite the difficulty in accepting their physical limitations; despite the long and cumbersome adaptation process and eligible funding limits; despite the stress and fatigue; the people surveyed were unanimous —the adaptations to their homes improved the comfort and quality of life for themselves and their families. During this two-year research project, the researchers were able to appreciate the quality of the work performed by the professionals of the SHQ, the CLSC home care program, and the TRG and building contractors.

CMHC Project Manager: Luis Rodriguez, Housing Needs Policy and Research

Principal Investigators: Geneviève Vachon and Carole Després, professors, École d'architecture, Université Laval

Research Team Member: Sébastien Lord, doctoral candidate in land use planning and regional development, École supérieure d'aménagement et de développement, Université Laval

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or contact:

Canada Mortgage and Housing Corporation
700 Montreal Road
Ottawa, Ontario
K1A 0P7

Phone: 1-800-668-2642
Fax: 1-800-245-9274

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